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Appl. No. 10/551,089

In re Di Giacomo et al.

Reply to Final Office Action of Jun. 7, 2010

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-11 (cancelled)

Claim 12 (currently amended): A drive assembly (52) for driving a rotary member (10) of a pump (7) of a combustion engine (1); the assembly (8; 52) comprising:

a movable supporting member (15);

a drive wheel (16) fitted idly to said movable supporting member (15);

elastic means (30) exerting a force on said movable supporting member (15) so that said drive wheel (16) drivingly contacting said rotary member (10) and a drive member (5) powered by said combustion engine (1) to drive the rotary member (10); and

actuating means (81) provided to exert a force in opposition to that exerted by said elastic means (30) to detach said drive wheel (16) from at least one of said rotary member (10) and said drive member (5);

said actuating means comprising a reversible electric rotary motor (81) such that a force exerted by said elastic means (30) to push said drive wheel (16) against said rotary member (10) and said drive member (5) being greater than the travel resistance of said actuating means (81) when maintained in a disabled rest condition;

said actuating means (81) also comprising a mechanical drive interposed between an actuator (81) and said movable supporting member (15);

said movable supporting member (15) comprising a connecting portion (20) disposed opposite to an end portion (18) supporting said drive wheel (16) and connected to said mechanical drive to move said supporting member (15) along a circular trajectory;

said mechanical drive comprising a gear drive (78) interposed between [[the]] <u>said</u> electric rotary motor (81) and said movable supporting member (15), and cam actuating means interposed between said gear drive (78) and said connecting portion (20);

said connecting portion (20) being a hollow tubular portion having an axis of symmetry (23) parallel to the axis of rotation (19) of said drive wheel (16);

said cam actuating means (59) comprising a first hinge pin (60) engaging said hollow tubular portion in rotary manner about said axis of symmetry (23) and hinged to a fixed frame (53) to rotate about a hinge axis (66) parallel to and eccentric with respect to the axis of symmetry (23);

said actuating means ([[58,]] 81) rotating said first hinge pin (60) about said hinge axis (66);

said elastic means comprising a torsion spring (30) housed in the tubular said connecting portion (20) and having one end fixed angularly to said first hinge pin (60) and the opposite end fixed angularly to the tubular said connecting portion (20);

said first hinge pin (60) being fitted integrally with a radial toothed portion (76) of said gear drive (78).

Claim 13 (previously presented): The drive assembly as claimed in Claim 12, wherein said first hinge pin (60) terminates at one end with a radial appendix (74) having a curved slot (75) with its center of curvature coincident with said hinge axis (66); said toothed portion (76) facing inwards of said slot (75) and meshing with a pinion (77) movable inside the slot (75).

Claim 14 (previously presented): The drive assembly as claimed in Claim 12, wherein said electric rotary motor (81) is housed in a cavity defined by said frame (53), and has an

output shaft parallel to the hinge axis (66).

Claim 15 (currently amended): The drive assembly as claimed in Claim 12 [[9]], wherein said frame (53) is connected integrally to a fixed body (50) by a single through screw (70) extending coaxially with said hinge axis (66).

Claim 16 (previously presented): The drive assembly as claimed in Claim 15, wherein said frame (53) has a recess (56) bounded by a cylindrical end surface (57) coaxial with said axis of symmetry (23); said connecting portion (20) being housed removably in said recess (56); and said first hinge pin (60) being connected in rotary manner to a second hinge pin (67) coaxial with the hinge axis (66) and integral with a supporting plate (55) of said frame (53).

Claims 17-21 (cancelled)

Claim 22 (currently amended): The drive assembly as claimed in Claim 12 [[1]], wherein said movable supporting member comprises two contoured portions (15a) of the same shape and size.

Claim 23 (previously presented): The drive assembly as claimed in Claim 22, wherein said contoured portions (15a) extend on opposite sides of a central plane of symmetry (P) of the drive wheel (16), which plane is perpendicular to the axis of rotation of said drive wheel.

Claim 24 (previously presented): The drive assembly as claimed in Claim 22, wherein said contoured portions (15a) are made of molded plastic material.

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Claim 25 (previously presented): The drive assembly as claimed in Claim 23, wherein said contoured portions contact, and are connected integrally to, each other.

Claim 26 (previously presented): The drive assembly as claimed in Claim 22, wherein the contoured portions define at least one end fork having respective arms (15b); each arm having a respective integral cylindrical projection (15c) forming part of a hinge pin coaxial with a relative axis (A), and to which the drive wheel (16) is mounted to rotate about the relative axis (A).

Claim 27 (currently amended): The drive assembly as claimed in Claim 12 [[8]], wherein said gear drive is in the form of a two stage reversible reduction gear drive (78) eemprises comprising a pinion (77), a gear (79) non-rotatably coupled to and coaxial with said pinion (77), and [[a]] said toothed portion (76) of said cam actuating means (59) meshing with said pinion (77); and wherein said gear (79) is in mesh with a sprocket wheel (80) drivingly coupled to said electric rotary motor (81).